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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,304	12/03/2003	Chien-Te Chen	60417 (71987)	9698

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Mr. Steven M. Jensen
Mr. Peter F. Corless
EDWARDS & ANGELL, LLP
101 Federal Street
Boston, MA 02110

EXAMINER

NGUYEN, TUNG X

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/728,304	Applicant(s) CHEN ET AL.	
	Examiner Tung X Nguyen	Art Unit 2829	<i>AC</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, and 8, 11-15, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Admitted Prior Art (heretoafter APA).

As to claims 1, 8, APA discloses a chip carrier for testing electrical performance of a passive component, wherein the chip carrier having at least one passive component mounted on a surface of the chip carrier, the chip carrier comprising: a core layer (figs. 7a-b, between the solder mask layer) having a plurality of conductive traces (82 of figs. 7a-b) formed on at least one surface; the conductive traces (82) comprising:

1. At least one first trace (82a) connected with the passive component (81) and having a first predetermined position (trace 82 of figure 7A is away in two part to be serially connected with a passive component) and two ends (82a, 82b of figure 7a); wherein the two ends are respectively electrically connected to a first bond finger (85) formed on the surface, mounted with the passive component (81); and to a first ball pad (87 of fig. 7a) formed on an opposite surface of the chip carrier (80); wherein the first predetermined position and the first bond finger are located on the same side relative to the passive component (fig. 7b); and

At least one second trace (82b) free of connection with the passive component (81) and having two ends (82b and 86) and a second predetermined position (part of 82 connected to 86, 87) located on the same surface as the first predetermined position; wherein one of the ends of the second trace is electrically connected to a second ball pad (87 of fig. 7a) located on the same surface as the first ball pad (plurality of 87 of fig. 7a); and

A solder mask layer (outer surface of figure 7b) applied over the conductive traces (82) and formed with a plurality of openings (85, 87 of fig. 7b) for at least exposing the first predetermined position and the second predetermined position.

Two test heads respectively with the first ball pad (87 of figure 8) and second ball pad (85 of figure 8), which are situated on the same surface of the chip carrier, to testing the electrical performance of the passive component (81).

As to claims 2-3, 11-12, the APA discloses the passive component (81) is a resistor or inductor (page 2 in the background).

As to claims 4, 13, the APA discloses (line 16 on page 3 in the background) each of the first predetermined position and the second predetermined position is at least formed with a nickel/gold (Ni/Au) layer.

As to claims 5, 14, the APA discloses the chip carrier (80 figure 7a) is a substrate.

As to claims 6, 15, the APA discloses (page 1 in the background) the chip carrier, wherein the passive component is serially connected to the first trace by means of surface mount technology (SMT).

Art Unit: 2829

As to claim 17, the APA discloses the test head is a test probe (61 of figure 8) of a test system.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (heretoafter APA), in view of Hembree et al. (u.s.p 6,078,186)

As to claims 7, 16, the APA discloses all limitation except for the core layer is made of a material selected from the group consisting of FR4 resin, glass resin, BT (bismaleimide triazine) resin, epoxy resin, polyimide resin, and cyanide resin. However, Hembree et al. disclose the core layer is made of FR 4 resin for electrically insulating with the probe to test component on substrate (see brief summary). Therefore, It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system of APA, and provides the FR 4 resin on the surface of core layer, as taught by Hembree et al. for electrically insulating with the probe to test component on subtrate (see brief summary).

4. Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (heretoafter APA), in view of Pedersen et al. (u.s.p 5,698,895).

Art Unit: 2829


As to claims 9-10, the APA discloses all of the limitations except for the conductive jig made by conductive rubber or metal. However, Pedersen et al. disclose the conductive jig consider to be conductive fuse (50a of figure 2) for enabling the passive component tested on the same time (col. 10, lines 1-10). Therefore, It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system of APA, and provides the conductive jig, as taught by Pedersen et al. for enabling the passive component tested on the same time (col. 10, lines 1-10).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X Nguyen whose telephone number is (571) 272-1967. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN
11/22/04


Michael Tokar
Supervisory Patent Examiner
Technology Center 2800